

CR-AVE Flight Summary  
30 January 2006  
*All times given in CST*

**General Information**

**Flight date** – 30 January 2006

**Flight description** – Flight 7 CR-AVE *In Situ* Payload Data Flight (10<sup>th</sup> flight)

**Flight duration** - 4.0 hours

**Crew** – Bill Rieke, Dom Del Rosso

**Instruments flown (25):** 2DS, ACAM, ALIAS, Argus, CAFS, CAPS, CIMS, CO<sub>2</sub>, CPI, CSI, FCAS, Frostpoint, ICOS, JLH, MACS, MMS, MTP, NMASS, Ozone, PALMS, PANTHER, PT, Scanning-HIS, WAS, Water Vapor

**Flight Log**

<b>Engine Start</b>	9:30 am	<b>Takeoff</b>	10:12 am	<b>Approach</b>	1:50 pm
<b>Data Rec On</b>	9:55 am	<b>Begin Descent</b>	1:28 pm	<b>Landing</b>	2:08 pm

**Gear extensions/retractions**

<b>Gear Up</b>	10:12 am					
<b>Gear Down</b>	2:02 pm					

**Weather Observations**

*Climb-Out*

- Passed through broken layer at 27 kft
- Low cirrus at 37 kft
- Enroute, nearly continuous lower cloud to broken
- Generally clear over water, with lightly scattered cirrus in direct path until southern end
- Target area completely cloud-covered to 41 kft
- No significant isolated vertical development observed
- Difficult to ascertain any higher- level blow-off from thunderstorms

*Cruise*

- Generally unrestricted climb to 49 kft
- MMS maneuvers at 49 kft
- Unable to determine individual thunderstorms for cirrus fly-through
- Descent over MROC unrestricted to 25 kft; contrails visible. Clouds immediately overhead MROC. Continued descent west of field.

### **Flight Profile**

- 10:21 am – 27 kft – Broken layer on climb-out
- 10:25 am – 37 kft – Low cirrus layer on climb-out
- 10:38 am – 49 kft
- 10:46 am – 49 kft – Took two photos east/west of solid cloud deck
- 10:50 am – 49 kft – Light turbulence
- 10:53 am – 49 kft – MMS pitch and yaw maneuvers
- 10:59 am – 49 kft – Waypoint 3; took two photos east/west
- 11:04 am – 49 kft – Light turbulence
- 11:11 am – 49 kft – Light turbulence; waypoint 5; took photo of thunderstorm top (north)
- 11:22 am – 49 kft – Took photo of distant anvil cirrus (south)
- 11:23 am – 49 kft – Took photo 300 degrees along track
- 11:36 am – 49 kft – Light turbulence; extended past waypoint 5; thin cirrus
- 11:42 am – 49 kft – Made a right turn to waypoint 6; took a photo (30 degrees)
- 11:55 am – 41 kft – Skimmed tops of cloud deck; noted CAPS display numbers
- 12:07 pm – 34 to 36 kft – Descent into cloud layer
- 12:12 pm – 34 kft – In solid layer with no bottom; ALIAS failed
- 12:13 pm – 34 kft – PALMS Cloud switch on
- 12:16 pm – 34 kft – Light turbulence, ALIAS reset after two tries
- 12:19 pm – Began return to base
- 12:22 pm – PALMS Cloud switch off
- 1:16 pm – 61.5 kft – Begin descent after zoom
- 1:18 pm – 57 kft – Performed MMS box maneuver
- 1:22 pm – Took two photos over MROC
- 1:28 pm – 57 kft – Flew back through contrails; turned on WAS 2
- 1:38 pm – 42 kft – Thin layer; no cloud penetration
- 1:55 pm – 10 kft – Low broken layer

### **Instrument Notes**

- Climb past 5 kft at 10:13 am
- Climb past 10 kft at 10:14 am
- Climb past 18 kft at 10:18 am
- ALIAS failed and reset after two tries